BEFORE THE

DEPARTMENT OF CONSERVATION'S DIVISION OF OIL, GAS AND GEOTHERMAL RESOURCES

In the Matter of:)
)
AQUIFER EXEMPTION PUBLIC)
COMMENT HEARING)
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TRANSCRIPT OF PROCEEDINGS

San Luis Obispo, California

Monday, September 21, 2015

Reported by:

MARCY A. STYLES,
CSR No. 10604

Job No.:
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TRANSCRIPT OF PROCEEDINGS, taken at Courtyard San Luis Obispo - Marriott, 1605 Calle Joaquin, San Luis Obispo, California, commencing at 4:07 p.m. on Monday, September 21, 2015, reported by MARCY A. STYLES, CSR No. 10604, a Certified Shorthand Reporter in and for the State of California.

APPEARANCES:

PAT ABEL:	DISTRICT DEPUTY WITH THE DEPARTMENT OF CONSERVATION'S DIVISION OF OIL, GAS AND GEOTHERMAL RESOURCES
DR. STEVEN BOHLEN:	DIVISION'S STATE OIL AND GAS SUPERVISOR
JONATHAN BISHOP:	STATE WATER BOARD'S CHIEF DEPUTY DIRECTOR
JON IVERSON:	DIVISION'S ASSOCIATE OIL AND GAS ENGINEER

San Luis Obispo, California, Monday, September 21, 2015

4:07 p.m.

MS. ABEL: Good afternoon. My name is Pat Abel. I'm the District Deputy with the Department of Conservation's Division of Oil, Gas and Geothermal Resources. Welcome to today's public comment hearing.

On August 20th, 2015, the Division of Oil, Gas and Geothermal Resources, the division in consultation with the State Water Resources Control Board and the Central Coast Regional Water Quality Control Board, sent notices regarding a proposal to expand the current aquifer exemption designation for the Dollie Sands of the Pismo Formation in the Arroyo Grande oil field. This is located in the unincorporated San Luis Obispo County near the intersection of Ormonde and Price Canyon Road.

This notice included information regarding all members of the public could submit comments on the proposed exemption, pertinent documents relating to the proposed exemption and initiated the public comment period which ends here tonight at 8:00 p.m.

Subject to the approval of the United

States Environmental Protection Agency, the proposed aquifer exemption would allow the State, in compliance with the Federal Safe Drinking Water Act, to approve Class II injection into the identified area, either for enhanced oil recovery or for injection disposal of fluids associated with oil and gas production.

I am joined today by the Division of State Oil and Gas Supervisor, Dr. Steven Bohlen. Also with him is State Water Board's Chief Deputy Director, Jonathan Bishop. And at the end is our Division's Associate Oil and Gas Engineer, Jon Iverson.

The purpose of today's hearing is to receive comments from the public and the affected community regarding the proposed aquifer exemption. While there are many important issues related to oil and gas in California, the purpose of today's hearing is to only receive comments regarding the proposed aquifer exemption.

The format for the hearing is as follows: After brief introductions from Supervisor Bohlen and Chief Deputy Director Bishop, Mr. Iverson will give a PowerPoint presentation regarding the Arroyo Grande aquifer exemption.

Once Mr. Iverson is finished with the presentation, we will begin the public comment period.

If you would like to speak today, please fill out a comment card and give it to Melissa Glau at the back table outside. Speakers will be called up as the comment cards are received. Please limit your comments to three minutes so everyone attending today has an opportunity to speak. We have a stenographer here recording the hearing, so please state your name and spell your name and please speak slowly and clearly so the stenographer can accurately record your comments.

If you would like to submit written comments today, please give them to Melissa Glau at the table outside.

We ask that if you are members of the media here today, please introduce yourself to the Department's Public Affairs Assistant Director of Communications, Teresa Schilling.

With that, I would like to now turn it over to Supervisor Bohlen, followed by Chief Director Bishop and then a presentation by Mr. Iverson.

MR. BOHLEN: Thank you, Pat. Good afternoon. My name is Steve Bohlen. I'm the Division's State Oil and Gas Supervisor and head of the Division of Oil and Gas Resources.

During my -- during the day, I wear a coat and tie. On weekends, I'm in blue jeans and a

T-shirt because I have a farm. I use groundwater for my farming. I grew up on a farm in Indiana, and I spent six years doing graduate studies on how fluids flow through the crust. So this is a topic that for me personally, is near and dear to my heart. And understanding how fluids flow through the crust, how there are both geologic and hydrologic controls on where those fluids go or don't go, is something that is part and parcel for preserving the state's drinking water and groundwater reserves. That is what this meeting is about.

This is about understanding and both for us to disseminate some information to you and for us to hear from you. It's very important that we hear from you. This is part of an extensive process to evaluate whether a certain oil zone, and to be clear about this, we're not talking about water that you or I would pump out and use for drinking, even with some considerable treatment. This is water that is intimately mixed with oil and is contained both in a geologic formation that looks very much like a bowl, and also has hydrologic constraints from where the fluids go.

But this is your opportunity to give us input, and there may be information that we're unaware of. This is part of an extensive process for the State

to decide what the next steps are with regard to this oil zone. So I appreciate you all coming. I look forward to your comments. Our ears are open and we are sensitive to your concerns.

The Governor and I and the Chief Director -- Deputy Director Bishop and I have spent a considerable amount of time talking about the importance of the protection of groundwater so we get that and we look forward to hearing your comments.

I'll turn it over to Chief Deputy Director Jonathan Bishop.

MR. BISHOP: Good evening. Thank you all for coming.

As of July 1st of this year, with a new budget trailer language, the State Water Board is now required to concur with the Division of Oil and Gas prior to submitting an exemption for aquifer or permitting any wells for injection into exempt aquifers so we're now part of this process.

Our job with the State Water Resource Control Board and the nine regional boards, is to protect the waters of the State.

The clean water -- the Safe Drinking Water Act, which is the act under which underground injection control programs are allowed, was designed so

that when injection occurs, it occurs to an aquifer that is appropriate for that. And for that to be the case, there would have to be some conditions that are associated with that.

One of those conditions is that the -- sorry, if you can't hear me, I will raise this up.

UNIDENTIFIED SPEAKER: Looks like you're having trouble.

MR. BISHOP: I will just hold it.

One of the conditions is that water being used for any beneficial use under the federal law, it means is it being used for drinking water under the State law, means being used for any purpose. And would it likely be used in the future for any beneficial use. So we evaluate that. And in this instance, it appears that the water that is being injected is back into an oil-bearing zone so that water is full of oil, so it is not being used today. It's unlikely to be used.

Another condition that we look for, is the fluid going to stay in the zone that is being injected. Is there containment? Is it kept in that area?

So we look at the geology. We look at the hydrogeology. It's water movement. How's the water balance in the system.

And so then once we have satisfied ourselves of the State Water Board and Regional Board that this is -- that we believe there is no beneficial use, it's unlikely to have a future-benefit use, and it's contained, then we will concur that this is a -- could be an appropriate aquifer.

The next step in that process is it goes out for public notice so we can hear from interested parties about that potential aquifer exemption. We look at those comments. We're here today to hear about oral comments, but we will also be looking at all the written comments, evaluating those, making changes if it's appropriate and then it gets forwarded on to USEPA because in the end, USEPA is the only agency that can grant an exemption from the --

THE REPORTER: I'm sorry, but could you repeat the last part?

MR. BISHOP: Yes. The USEPA is the only agency that can exempt an aquifer from the Safe Drinking Water Act. And so this particular instance that we're going to hear about in a minute in more detail, is an existing exemption which is being -- a proposal to expand that exemption beyond the current limits that it is today.

So I look forward to hearing from all of

you tonight, and I will turn it over for a more detailed presentation. Thank you.

MR. IVERSON: Good afternoon, everyone. I'm Jon Iverson, and I will be presenting an overview of the aquifer exemption that we're asking here for the Arroyo Grande field. Give me a second.

(Brief pause in proceedings.)

MR. IVERSON: I pointed out we do have water available if anyone is thirsty. It's the water from the hotel.

All right. So today I will be presenting on the Arroyo Grande field which is located in San Luis Obispo County, and we will be discussing the aquifer exemption application for the Edna Member, Dollie Sands in the Pismo Formation.

The project we are working with here is an EPA Class II injection project. Class II allows injection of oil field brines and anything associated with the oil field process. There are six EPA classes in total. But we're doing a Class II, which is just for oil and gas.

Within that, we have two different types of injection wells. First is water disposal, which is just to get rid of the water back in the formation it came from. And second is enhanced oil recovery, which

is both cyclic steam well. So a well that is producing oil and then they stop, reverse the process, start injecting the steam back into that well to heat up the nearby or near well bore oil and then they produce that again.

And then there are also wells directly injecting steam into the formation, and that is all they do is direct steam. That is a steam flood well. In the Safe Drinking Water Act under Code of Federal Regulation section 146.4, they have the different criteria, as Mr. Bishop talked about, for exempting an aquifer.

The first thing that has to be approved of or come to a head on is A, it does not currently serve as a source of drinking water. And then the exemption below that is B or C, and in B there are four choices. We're using the first one, which is that it's hydrocarbon producing or bearing or capable of hydrocarbon production. The other sources can be that it's too deep to drill for a water well, too contaminated to produce for water and another one is for solution monuments, so we're not available for that.

And then the final exemption allowed is that it doesn't expect to be used in the future. But

what we're using is that it currently is not a source of drinking water, and it won't be in the future because it's hydrocarbon bearing.

A quick history of the area. Seeps are natural to the area. The native Indians, the Chumash Indians used them to seal their watercraft, called tamul (phonetic), and they could go into the ocean with those.

And then the first written account was from 1770, a Spanish explorer, Gaspar de Portola, where he had to, as he was going from essentially Shell Beach north to Edna Valley, they came across a stream. It was more of a marsh at that point. But it was so oily, they had to throw 200 sticks into the tar to get across. So the local area has been known for oil production for centuries.

The original oil production in the Arroyo Grande oil field was actually from the top 300 feet of soil, which are tar sands. There are extensive tar sand accumulations from Price Canyon west to Los Osos on the surface in areas. And that is how it was originally produced in the remote Arroyo Grande oil field. The tar sand was mined and used for road-surface material and pavement.

The first oil well was completed in 1906,

and in 1919, the State of California designated it as the Arroyo Grande oil field. Water flood, which is a type of enhanced oil recovery where you are injecting water to push oil toward the production well began in 1949, and that is no longer an injection process for this field. Cyclic steaming -- which some of you think is a new process -- it actually started in this field in 1965, and then a dedicated steam flood project began in 1980.

Currently about 560 wells have been drilled within the Arroyo Grande oil field, with 260 of those wells still available for production. Not all of them are being used. Some are in an idle state. And 19 million barrels of oil have been produced from the oil field. This is currently the fifth largest field in the district through boundaries by production.

On average in the year 2015, the field has been producing just over 1,300 barrels of oil a day. A barrel is 42 gallons. And along with that oil production, comes up close to 30,000 barrels of water. It is not two separate production streams. It is just oil and water is coming up. That is how they are underground. Of that 30,000 barrels of water, just over -- just under 12,000 barrels a day is cleaned up and turned into steam and reinjected into the formation

to heat up that oil and have it flow to the oil wells.

Currently about 18,000 barrels a day is cleaned up through our reverse osmosis plant and put into Pismo Creek, which drains out to the Pacific Ocean. And at the largest capacity for the reverse osmosis plant, that will be 20,000 barrels a day, which is about two and a half acre-feet of water put into the creek every day and being removed from the formation.

This is a map of the proposed area. To the north this red dotted line is the Arroyo Grande fault. This blue dashed line is the line that we are asking for, along with the boundary of the fault. The current allowed exemption area is within these yellow dashed lines. Right here is locally known as the duct (indicating), and the County has called this the seed, the worm and the grub. These three yellow circles are within what is called the Oak Park area. And all the wells there are currently abandoned, and there are no plans in the future as of yet to reinitiate activity in that area. All the current activity is within the bounds of this blue dashed line, and this yellow part of the foot of the duct.

There is a black dashed line outwards on either end, which is the full extent of the permeable Dollie Sands. But within the blue lines is where we're

going to ask for exemption to keep the injection within here.

And the green solid line all around is the administered boundary for the oil field. So any oil drilled within this green line is an Arroyo Grande oil field. Outside of this line would be considered a San Luis Obispo County well.

And on the side here we have a typical electric log or a type log for the field. And this just kind of shows the different layers from surface down. And what we're talking about is the Pismo Formation here, and within that, the Dollie Sands. Below that there are some productive sands, primarily in the Oak Park area, and that is the Martin Sands and the Alberta Sands. But once again, this formation that we're asking for exemption is only for the Dollie Sands, and then under all that, is the Monterey.

We have some geologic interpretations over here on the posters. We have, you can see -- I am going to bring them up to show the geologic representation of what is underground.

In this field, as Dr. Steve Bohlen discussed earlier, it is a syncline. Not a lot of oil fields are that. Most of the oil fields are kind of an upside-down bowl. This is unique in that it's a

syncline. That it's a regular right-side up bowl, and the fluids can drain down to the center of the bowl. In this dark purple area in the center is the bottom of the bowl and the lips come up along the edges around here (indicating).

The application has six different cross sections through the formation using the electric logs that were used in drilling the well. I'm going to show you two of the main ones. A, A prime, which goes from the southwest to the northeast corner right through the center of the field. Price Canyon Road runs right along here. And then B. The B prime, which is essentially from the west to the east across the heart of the field extending outside of the area.

So this is A to A prime going from the south to the north. And what we're asking for is this darker yellow-black dotted area, the Edna Dollie Sands from the fault, which is right here (indicating). And to the edge of the permeable Dollie Sands to the south.

One of big things we have, as both Dr. Steve Bohlen and John Bishop asked about or talked about, was containment. One of the routes of containment we have here is that we are underlaying and pinchout on the sands and on the sides with a miguelito formation. A miguelito is a mud stone that was

deposited eons ago, whereas the Edna Dollie Sands are sands. They allow fluid to go through, whereas the miguelito is a very tight rock formation that is very, very low permeability for hydraulic conductivity. So that is one of our --

UNIDENTIFIED SPEAKER: The scale on the side --

MR. IVERSON: On the side --

THE REPORTER: Excuse me. I will need your name.

MR. BOHLEN: We would like to finish the presentation, please, and then we will take questions.

MR. IVERSON: So for reference, this is a surface here and the deeper part here is down to 1,500 feet. I think the deepest is around 1750, so one thousand, seven hundred fifty feet below the surface.

And then underneath all that is the Monterey formation. But once again, all we're asking for in the exemption is the Dollie Sands within there.

This is the second cross section we will do, B to B prime from west to east. And here again, you can see the bowl formation dipping down and coming back up, and it's thinning out. All injection is to stay within the shaded area. And that would be part of the project approval process, but this is what we're asking for exemption, the Dollie Sands all the way down

to the miguelito formation.

And all of these lines are wells that have been drilled. If you see the -- it looks like a squiggly line with some green in there. This is an electric lug. So when the company drills a well, they can send a tool down the well and using electricity and various tools, and they can tell what kind of liquid or formation is outside of the well at that point.

So where you're green is where you are seeing lots of oil, and if you go through, it actually thins out to less and less. Our poster on the left in the center actually has a mud log. So as they are drilling the well, the bits of formation that are coming up out of the well, they take samples of it, log it, determine how much oil is in there. And the well, we have an example on the left of the poster, is pool list 4, which is off to the west flank. And it has good oil shows from the top of the injection interval, all the way down to trace amount of oil at the bottom, but there is oil.

This is a map of all known oil wells in the Arroyo Grande oil field. You can see off to the southeast in the Oak Park area all these black dots. They have a cross through them and that means it's plugged and abandoned. And all the wells that are

left, just a solid black dot without a line through them, are within the center of the bowl, as we call it. And most of the disposal is occurring on the outer flanks of the proposed area.

These are the -- all the water disposal wells that are currently being used are off to the east. These are two proposed wells to be drilled. They have not been drilled as of yet.

And the orange line is the approximate well bore path for each well. So the wellhead that you would see at surface is right at the black dot, but the well itself drills out directionally anywhere from 360 feet to over 1,500 feet in length away. And you can see most are going off to the west. There is one pool or stream that drills back east into the oil field itself. But these are the wells used for disposal, and currently the only well that is being disposed of is the reject stream from the reverse osmosis plant.

Another form of containment, the one we believe is the strongest case for containment is the hydraulic analysis of this formation. There is a geologic containment; we have the fault to the north and then the miguelito all around it on the other three sides, but we wanted an additional layer of containment, so we did a hydraulic analysis.

We essentially graphed out or plotted out that bowl and found where the lowest lip of that bowl that if you were filling it up with fluid, it would over -- eventually overflow and leave the formation.

All these numbers are in the application, but I want to show them here. And that spill point that we used that was mapped out, is at 270 feet -- 75 feet above mean sea level. And that is not from surface, you reference mean sea level there.

The closest injection well to that area is pool list 8. Its top perforation or hole in the casing where fluid can exit the well and go into the formation, is a depth of 455 feet from ground level. If you convert that to mean sea level, you're actually 34 feet below sea level at that point. So what it would take to fill up from that point up to that spill point, you would have to go 309 feet vertically to get to the lip of that bowl. And all of these numbers are assuming nice, clean pipe. No sand and rock. You're only using water, whereas here it's actually going to be multiphased. There will be oil, water, gas that will all tend to slow the response of filling up this bowl.

Using that hydraulic head, assuming freshwater, which exerts a pressure of point 435 pounds

per square inch -- or per depth, of foot and depth. We get a reservoir -- or a hydraulic head of 134 pounds. So we would have to exert 134 pounds on top of the reservoir pressure to exceed that 309 feet up here. So we're injecting here. We would have to go an extra 134 pounds above what is already here to go over the lip of the containment.

We have got two values here. One in February of 2013. So at that time, the company went and surveyed several of their pressure-monitoring wells within the formation to determine an actual pressure grade within the formation. How much pressure is down in there. They then did it again recently in June of 2015, and we're comparing the two results here.

So for the injection well here, list 8, at this injection point without any injection occurring, the reservoir pressure in 2013 was 173 pounds just naturally in the formation. About that time and in mid 2012, the company Freeport-McMoRan began a reverse osmosis plant started up and they began de-watering the formation.

From February 2013 to June of 2015, that same spot went from 173 pounds to 102 pounds. So we have already reduced the pressure in the zone, thereby -- there is one shown that we're not filling

the bowl up. We're actually depleting the bowl itself.

Now, all injection occurs below the fractured gradient, and here on -- actual injection at the perf is 286,000 to 2013, and by de-watering the reservoir and making it more pressure to overcome, currently we're at 230 pounds injection, injecting at that well. So we don't have a difference in the reservoir pressure and what you're injecting greater than what it would take to overcome this hydraulic head and fill up the bowl. We're depleting the bowl and allowing fluids to drain along the bowl down.

This is a simplified fluid-balance diagram for the area. Once again, the formation itself is a bowl. Every day over 28,000 -- this is an average since January 2014. So every day 20,000 barrels of fluid is removed from the formation. It goes into an oil-processing facility. Twelve hundred barrels on average since January 2014, then are removed from the formation and sold for refining purposes. The rest of that is 27,000 barrels of water then goes into a water softening plant where they are removing the hardness from the water so that when they turn it into steam, it's clean. It doesn't plug out in the pipes and you get plugging.

Of that 27,000 barrels of water coming

out, a little over 7,500 barrels is turned into steam to re-inject back into the formation. And about 19,000 barrels is sent to our reverse osmosis plant. Our reverse osmosis plant is similar to one you can have underneath your sink at home. You are going to have two streams coming out of it.

One, the bulk of it is clean, clean water. Currently almost 15,000 barrels on average goes into Pismo Creek. And that is not straight out of the reverse osmosis plant. They actually have to add minerals back into the water so it doesn't strip out the creek itself and then Pismo Creek then flows out of the formation or out of the field to the Pacific Ocean.

The second stream from the reverse osmosis plant is a concentrated brine. And currently that is about 4,500 barrels of concentrated brine that is going back into the water disposal wells, back into the formation where that water came from.

So here is just a loop of the water and the oil (indicating). The oil comes out, but the water all stays in, and actually a large amount -- at the most will be 20,000 barrels a day or two and a half acre-feet, is actually cleaned up and put into the Pismo Creek, and it leaves the formation. So this bowl every day is losing over 20,000 barrels of liquid,

thereby confirming that we're not filling the bowl up, it's actually draining.

Concurrently the State Water Board and Division of Oil and Gas believe this is the best use of the water within that proposed area. The only way to make the water recommendation facility economic is to pull the oil out, sell it, return most of that water back in the form of steam in order to get that water that does go into the creek that can be used for beneficial use. So really the only beneficial use is to create steam and back in there.

Without the process, the oil itself has free oil. That's why they're producing. There is oil in there. Naturally, with the oil, you're going to have all the total petroleum hydrocarbons, the benzene and toluene. There is other makeup of the water, selenium. All sorts of stuff that naturally occur in the formation. So that is why you need a reverse osmosis plant to clean it up where you can use it. Currently the reservoir estimates are for 25 years or so in the oil field, and with this extension, that could go farther.

And for conclusion, we have shown containment both geologically with the pinchout into the mud stones or the fault to the north, but then also

we have the mass balance. More fluid is removing -- is being removed from the formation than goes back in. And the area that we're asking for is hydrocarbon producing or bearing throughout the extent.

And that concludes my presentation.

MS. ABEL: At this point we will open it up for public comment. And I'd ask that you come to the mike and again, remember to state your name and speak clearly for the court stenographer.

And let me -- if Supervisor Adam Hill, if you could come to the -- thank you.

MR. HILL: Thank you. Adam Hill from the Board of Supervisors here in San Luis Obispo County, and while I appreciate you coming here to have this public hearing, at no point has there been any outreach to my office by DOGGR or by the Water Board. And as you can tell by the public scrutiny that this has received, that that would be appreciated from our State partners. So I would like to express some of the concerns on the process that we have heard from our constituents, and that has increased as public scrutiny has increased as well. 0057 0057-1

So I'm reserving any comments or judgment on the project itself and focusing specifically on the review process. And of course, the overall concern

is -- that all of my constituents had, in a lot of this, is highly technical information, including the presentation, is the concern of the quality of water in neighboring wells used for higher beneficial purposes. 0057-1

So on to the process. It looks like the scientific study that the application is based on was commissioned or provided by the applicant. With a decision of this magnitude, I would think that the California Department of Conservation Division of Oil Gas and Geothermal Resources would commission their own consultants. If we were to let every applicant commission their own consultants, we would probably never have any project that was ever recommended for anything but approval. 0057-1

The information page on the DOGGR website, in addition to the study provided by the applicant only provides a one-page summary analysis and the Water Board, a two-page letter, both agreeing to move forward with the exemption due to the information provided by the applicant. It does not provide any actual analysis from DOGGR or the Water Board staff regarding a large policy decision that has potential to affect our most precious resource right now, which is our groundwater. 0057-1

There is no proof of peer review of the

information provided. There is -- perhaps, you know, this is to be clarified. If there has been extensive review by both agencies and anything other than the summary letters that have been provided, we certainly would like to see that. 0057-1

The aquifer exemption matrix points out that only three other exemptions in this state currently exist. So essentially this is a substantial process for the agency to stand behind without getting or without providing the information from any third-party experts. 0057-1

This is a substantial process for the agency to stand behind without getting third-party experts to conduct their own studies and their own review. And these are things that we would like to have more information for from whether it be on your websites that are provided. We are also, of course, encouraging you to please reach out to the elected officials in my area.

In my area, I also have a nuclear power plant and our State partners and general partners, don't fail to let us know when there are going to be hearings and if there is going to be a process that will potentially affect our constituents.

And finally, the one EIR process question

that did come up repeatedly, and I know this is scheduled to come back before our planning commission again, is have the conditions changed since the EIR was completed due to the conditions that have come about because of this severe drought?

0057-1

Probably, I would say two-thirds of the questions that we get on anything these days has to do with the impact on water. The impact the drought has had on all of us. So those are the related questions on the process that we're hoping to have addressed, if not today, then certainly in your subsequent information. Thank you.

MR. BISHOP: I will speak up. My name is John Bishop. Thank you very much for your comments, and I did want to correct one statement just so that you understand that there have been three aquifer exemptions approved since -- I think that is correct -- since the original aquifer. There are many aquifers that have exemptions in the State, so this is the third one.

UNIDENTIFIED SPEAKER: So a total of -- this is the third one since the --

MR. BISHOP: Since the original privacy agreement which exempted the aquifers that were oil fields at that time. And so I appreciate your concerns

and we will try to put our more technical review on the web page, but I understand your issue.

UNIDENTIFIED SPEAKER: Thank you.

MS. ABEL: Next will be Laura Bjokhlund, followed by Michael Hannon.

MS. BJOKHLUND: My name is Laura Bjokhlund, and I live at and own 115 and 125 Tolosa Place in San Luis Obispo. My property is less than a mile from the oil field. I have owned this property since 1976, and I have resided there to raise my family and livestock. We have a well that provides property with water for the house and for livestock. 0021

I'm here today as I'm very concerned. I'm very concerned about our water in our neighborhood and worry about future generations to come. We're in an extended drought with very little water already. How can you put my well at risk by granting this exemption. 0021-1

In 1981, I'm standing at my kitchen window which is at a top of a hill on my property, and I notice out the window down in the bottom of the pasture, a black -- a black oil shooting out of the ground. A geyser about 200 feet high. I remember it shooting into the air for a better part of an hour. And after the water stopped gushing, it started

bubbling making a pool of 30 feet across. Once the oil stopped gushing out of the ground, workers from the oil field came and covered it up with topsoil. They said this happened due to the injection of the oil pump.

So how can you state that the oil field on my property and drinking water are not hydraulically connected? You must prove that there is no way this could happen. 0021-1

Words like "we expect the injected fluid to remain within the proposed exempted areas" will not suffice. You must do more monitoring and mapping for where the water will go. I request that you deny this application as it will be putting projected aquifers and my home in grave danger. 0021-2

Thank you very much for your time.

MS. ABEL: If we could -- it will help with the function, if you choose to agree, if you could just go like this (indicating) and that way we can move on to your next speaker.

UNIDENTIFIED SPEAKER: It's really hard to hear back here. Can you turn up the volume?

MR. HAMMON: My name is Michael Hammon, 0041 H-a-m-m-o-n. I live at 665 Bennett Lane, Arroyo Grande in the county. I border on the Godfrey Ranch and the -- there are a couple points I'd like to make.

I attended the planning commission meetings a couple weeks ago. And one of the comments the oil company representative had about the -- he talked about how the local Indians have been collecting oil from Price Canyon off the surface forever. And it's probably true, but I don't think that the Indians were injecting steam and toxic chemicals into the water to get this oil.

Also, at the same meeting, the commissioner asked what the plan was in case there was evidence that these toxic chemicals were spreading around beyond the sentinel wells. He wanted to know what the plan to remedy this was. Would they shut down the injecting and pumping? The answer from the oil company was they had to keep pumping because there was so much pressure, it would be worse if they shut it down.

0041-1

It seems to me, the pressure is there because once again, they are injecting steam and toxic chemicals into the ground to create this pressure.

The question was not answered. I took it to mean that there wasn't a plan for the toxic -- if these toxic chemicals went beyond the wells.

The Godfrey Ranch borders on the oil company property and under the ranch is the Oak Park

aquifer which serves hundreds of families in the area. This is where they want to inject toxic chemicals.

How can you even consider approving this massive expansion of drilling in this area? This is corporate greed, pure and simple. Thank you.

0041-1

MS. ABEL: Natalie Risner, followed by Andrew Grinberg, followed by Blair Knox.

0058

Natalie? And if Andrew could be ready, if you can stand to the side.

MS. RISNER. Hello, my name is Natalie, Natalie Risner, R-i-s-n-e-r.

My name is Natalie Risner. I live and own property at 115 and 125 Tolosa Place. I live less than a mile from the Arroyo Grande oil field. My family has owned the property since 1976 and use the property for livestock and residences.

For the most part, the oil field operations have been good neighbors, changing hands many times over the years. They have had some problems -- we have had some problems with noise in the past years and have had some odors travel over as well.

0058-1

I'm here today as I'm very concerned for the safety of my family and for all the surrounding neighbors. Due to the request of the applicant for the proposed aquifer exemption, our last water test in 2012

showed that our water is suitable for drinking, but what if that changes? We need to be protected from the potential of contamination.

We had an incident my mother spoke of just before, Laura Bjokhlund, in 1981 when the oil came bubbling out of the ground on our property. It was a result of steam injection at an oil pump. What is to stop this from happening again as the oil field increases its production and adds more steam injection wells?

This event contradicts the statements from the Division of the Water Boards that the addition of new Class II wells within our vicinity are not hydraulically connected to our properties and potentially a large number of other properties within the region that also rely on beneficial uses of water as defined by the State.

0058-1

Through our research, we have a growing concern for the lack of groundwater flow modeling data for the region. The 2000 EIR specifically states that the Arroyo Grande oil field lies within a structurally complex area and there is a significant fault in the area.

0058-1

How can we can be certain that the proposed injection and oil operations will not

0058-1

significantly affect the long-term water quality and quantity? A lot has changed over the years. You can't keep saying the oil field has been here since 1906 so things need to keep going as business as usual. This is not 1906, and they don't pump oil in 2015 like they did in 1906. They have learned a lot since the Arroyo Grande field started.

0058-1

In a statement from Freeport, it had been documented that water wells inside and outside the oil field limits are naturally contaminated with hydrocarbons because of the prevalence of the tar accumulation. This is a broad statement because there is no data collected prior to the initial development of the oil field in the early 1900s.

How can you conclude that these are naturally contaminated when the actual oil field production began in 1906 with no baseline data to -- that was available prior to that time period.

We are requesting that the Division and the Water Boards deny the application request until further information is made available and a detailed monitoring program is in place to assure the public that our existing USDW's will remain safe for consumption for future generations.

Please carefully consider this applicant

has not demonstrated that exemption of this aquifer will not negatively impact the surrounding USDW. There is a general lack of qualified flow modeling, lack of baseline monitoring and lack of overall knowledge of the complex dynamics of our groundwater system.

Thank you.

MR. GRINBERG: Thank you. My name is an Andrew Grinberg. My last name is G-r-i-n-b-e-r-g. I'm the oil and gas program manager for the Environmental Group of Clean Water Action.

And first of all, I would like to say how much we appreciate the process in that the public now has an opportunity to engage in the decisions of which aquifers should be exempted and which should be protected in our state. This is really a big turning point after decades of failing to provide the adequate rigorous review that should be applied to such a big decision. So from an environmental organization that works nationally and in numerous states that have -- that are grappling with these decisions, aquifer exemptions, I think California has a unique opportunity to really change course and lead by example by doing, you know, the adequate review that is required for such a big decision.

I'd like to make -- add into our comments

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0059

that we would like to see an extension, and this could be applied to future aquifer exemption applications going forward so that written comments could incorporate, you know, what is being shown in the presentation at the hearing. And so it would be much appreciated if there is some time between the end of this presentation when written comments are due.

We do have some concerns about this application specifically and would urge the Water Board and Division of Oil, Gas and Geothermal Resources to not concur that this aquifer is appropriate and to not recommend an exemption to EPA. The biggest deficiencies that we see in the application as it stands right now is the lack of demonstration of nearby water wells being protected and isolated.

In that location, it just mentions that there are numerous water wells within one mile of the oil field. Yet I have not seen them, and maybe I missed it or it was in a different analysis, an actual map of the exact locations of water wells so therefore, how do we know whether or not they are isolated.

0059-1

I'd also like to question the criteria overall being used for this application. The criteria in Safe Drinking Water Act were written decades ago and didn't really take into account the current water

0059-1

situation here in California. And so the fact this aquifer may contain hydrocarbons should be considered; whether or not this aquifer will or will not ever be used for a drinking water source, should be viewed in light of potential future water shortages which we will likely see more in the future.

0059-1

And then we would like to just also note in the presentation at the -- you described at the very bottom of the aquifer, it's only trace amount of oil, and therefore, is that zone appropriate for an exemption because is that level of oil saturation enough for it to be commercially produceable.

So I have questions about where the edge of that commercially produceable zone is, and therefore, if it is not isolated, is that water appropriate for drinking water sources. And so I would like to see further analysis about where exactly in that whole column, the concentration of oil is actually produceable. And, you know, it does seem like we're just going off the word of the oil company, and I would like to see some more independent analysis along these lines.

0059-1

Thank you.

MS. ABEL: Blair Knox, followed by Roger (inaudible), followed by Michael Bore.

MR. KNOX: Excellent. My name is Blair Knox. 0060 It's K-n-o-x. I'm with the California Independent Petroleum Association known as CIPA (phonetic). We represent over 160 oil and gas producers throughout the State, including over 500 associate members drilling companies, service supply companies, accountants. You name it. What it takes to run an oil industry, they're our members.

We appreciate having the opportunity to make comments here today. I see a program that has successfully regulated injection well in California for over 30 years. This California production has been since the 1980s until 2011 for one million barrels a day to half a million barrels a day to the oil (inaudible). The difference was made up by tanker or rail traffic. Therefore, the U.S. program does not allow the continued economic re-injection of produced water back into formation from which it came, then in state production oil and natural gas will shrink, and tanker and rail traffic from foreign sources with less environmental rules and regulations will increase.

Since over 90 percent of the fluid that comes out of the ground is water that needs to be re-injected without the YC (phonetic) program, we cannot produce oil in California. Re-injection of

water and natural gas is the most environmentally favorable way to treat those oil field fluids.

CIPA supports DOGGR and State Water Board's prompt review of all aquifer exemption applications. Over the last 30 years, the size of the oil fields have been documented to be larger than they were believed to be in 1983. Updating the exemption boundaries to conform with current geological understanding of the state's law in gas fields, is important to allow development to resume in areas that have a long-standing production in injection operations.

0060-1

Significant contributions -- significant confusion has been generated through the media reported about the nature of the exemption request. Prompt review on the geologic and technical data behind these applications is necessary to reduce public confusion. Encourage the review of focus stripping on technical and geological principals, not political principals.

0060-2

Thirty years of injection operations in these areas does not yield any evidence of an issue. Protecting the environment, jobs, taxes, domestic energy, production by continuing to administer the USC (phonetic) program in a reasonable and viable manner.

Thank you.

MR. MASTAKO: I'm Rodger Mastako, and that's Rodger with a d. The last name is M-a-s-t-a-k-o. 0031

There is a significant emphasis that has been placed on Freeport-McMoRan as a century-producing operation in Price Canyon. The Chumash were there. That is not really true. Freeport-McMoRan is the new guy in the neighborhood. They took it over a couple years ago and took it over from a little, nice company called Plains Exploration. It was kind of our neighborhood oil field guy. It was kind of fun to say those are those guys down there.

I remember there was a particular intersection where the oil field foliage was blocking the view around the corner. I called the manager and that was cleared up in three short days.

Freeport-McMoRan is not our nice neighborhood oil field operator. They are a very large and aggressive, multi-billion company. One of the things is they are the largest producer of copper in the world. They really know how to get what they want worldwide. They are very impressive.

Mr. Martini (phonetic) of Freeport-McMoRan says they want to ramp the production up by a factor of seven. One question to raise, regardless of my presentation, that would bring the

useful life of the fields in 25 years to three, and they are not planning to go out in three years.

They have been very clever about how they roll out their plan to expand out the field, which I'm sure even is beyond what they are talking to us about right now. Freeport-McMoRan and Phillips applied for and got a five-mile-long, five-billion dollar high-pressure, high-volume pipeline moving up, actually my little canyon. They got that done shrewdly as a minor use permit and cost about $11,000 for that permit. These guys are very, very good.

As with the proverbial nose of the camel in the tent, they got their pipeline. Most recently they went into the county planning and asked to do 30 more wells under what they call Phase 4, which is going to produce the additional well. They are here tonight asking for steam injection. On the agenda, very soon is phase 5, another development proposal. All of this brings the field up to 10,000 barrels a day which is big. Seven times what it is right now.

As I said, they are big, aggressive, and sophisticated. They have an army of Harvard lawyers, Stanford MBA's, and they typically negotiate with southern countries. They go to Chile. There are very good at getting what they want. We, like contrast, are

kind of hayseeds. We came here to watch the cattle drive from the Mid State Fair and drink some wine and surf. We're no match for Freeport-McMoRan.

I resign to the fact that our neighborhood oil field isn't coming back. It will be missed. Instead it is going to become a big part of the world energy picture. So be it.

What I'm asking for today, as Ronald Reagan might say, is trust with verification is a special way, protect our oil. I want to trust that you will protect our water by ordering a necklace of century wells all around Freeport-McMoRan.

MR. IVERSON: Thank you for your comments, Mr. Mastako.

MR. MASTAKO: I'm very sorry.

MR. BISHOP: If you can wrap up. We're not going to cut you off, but if you can wrap up. Thank you.

UNIDENTIFIED SPEAKER: He can have my time.

MR. MASTAKO: Thank you very much.

What I'm asking for is to protect our water by ordering a necklace of century wells around the Freeport-McMoRan property. I want trust that you will order ongoing County compliance verification funded by McMoRan. All I'm asking is that when I bathe

0031-1

0031-2

my children, it can be the same safe water that the Freeport-McMoRan executives enjoy in Bakersfield. We could all win.

0031-1

MS. ABEL: Kay Gore, followed by Andrew Christie, followed by Wayne Allen. Kay Gore.

MS. GORE: My name is Kay Gore, G-o-r-e, and I live in the unincorporated part of Arroyo Grande off of Heritage Lane and we have a Heritage Lane Water District that we rely on. And quite frankly, I'm getting a little bit tired of coming to these kinds of meetings and fighting for the people versus companies that are just out for greed.

0061

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Freeport-McMoRan has an abysmal environmental record. And I'm going to tell you right now if there is a disaster, we, the taxpayers pay because typically their insurance doesn't cover the disaster, number one. And number two, if they have to pay something because they get a fine? Guess what, they do. They write it off on their income tax, so we, the taxpayers pay.

So it's not just about the drinking water, it's about the fact that these companies come in -- and I realize we need oil, but they come in -- and first of all, I just learned today, that there may not be an independent study, and I'm sick and tired of

0061-1

companies doing their own studies coming in and ruining our environment.

We came here to live in this place because it is a beautiful environment. And I have been over there. I have seen the -- as the last speaker said, I saw the cute little oil field. But when I look up there -- and I'm no geologist, but I'm also not stupid -- and I looked up there and watched that presentation and I found out that there's an Arroyo Grande fault -- eek (sic).

We live in an environmental fault area. And what happens when they extract the water and they extract the oil? What is happening in a lot of places is the ground falls in. I'm not sure this is safe, and I'm asking you, in fact, I'm begging you to please get an independent study and to put in what the last guy said, monitoring if this thing goes in, because we can not afford the health and the prosperity of our area to be sold out for the greed of an international company. Thank you.

0061-1

0061-1

MR. CHRISTIE: Good afternoon. My name is Andrew Christie, C-h-r-i-s-t-i-e. I'm the director of the San Luis Chapter of the Sierra Club representing the Sierra Club 2,000 members in San Luis Obispo County.

0062

State and federal law safeguarding our dwindling water resources are designed to prevent damage before it occurs. These State laws are crucial in dire circumstances like what occur in drought in which the governor has declared California's first-ever mandatory water-use restrictions.

The Department of Conservation Division of Oil, Gas and Geothermal Resources admits that for years it has improperly allowed thousands of wells to inject oil wastewater into protected aquifers in violation of the law. 0062-1

Rather than halting the illegal activity, DOGGR has promulgated in new emergency rules that allow ongoing illegal injections. These rules during the definition and purpose of a public emergency, upside down. With that background, we are somewhat concerned by this project's lack of the evaluation of the impacts of earthquakes which we have had a few since 1906, and we are likely to have quite a few more if Freeport-McMoRan proceeds with their expansion plans with steam-injected wells and the potential of earthquakes to cause water to migrate from the proposed aquifer into surrounding water resources elsewhere.

We are also concerned by the lack of a map for exactly where the water wells are in relation 0062-1

to the proposed exempted aquifer and the lack of groundwater flow modeling.

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The chemical composition of the wastewater proposed to be injected into the exempted aquifer is also fairly sketchy and more information is clearly needed there. Without all that information, the Water Board should not concur with DOGGR's claim of exemption. Thank you.

0062-1

MS. ABEL: (Inaudible), followed by Wayne Allen, followed by Ted Gore.

0063

MR. ALLEN: Good evening, and thank you for this opportunity.

I'm going to take a little different tack. I'm going to take you back to 1798. There was a man named Thomas Melthis (phonetic), who made a study of population. There was about a billion people he estimated at that time, 217 years ago, and he began to be concerned -- an educated man from England -- he was concerned that too many people, not enough food. He was concerned about the food item at that time. And he talked about it and other people began to realize, yes, there was a lot of people so maybe this is a problem. But unfortunately, for his particular platform, along came the industrial revolution where we began to come up with new types of equipment and large-scale

equipment that could produce more food with fewer people and so on and things seemed to be going along kind of fine.

And then also about that time, along came a man named Edmond Drake around 1860, 1859, I think was the exact date, and he produced this oil well and that was the beginning of something we had never really heard of before. Oil, oil is here. We had gotten along for millenniums without any oil other than perhaps some whale oil and some other types of olive oil and things of this type, but not large-scale oil like the petroleum industry began to produce.

And over a period of time, this seemed wonderful. We had plenty of oil. Everything was fine. But over a period of about a hundred years, we began to find pollution, we began to find other issues of disposal of this oil producing problems for people to live by it, and then along came more and more people.

We're now up to seven times that number. They tell us we're up to seven billion people. Jerry Brown, I heard him on -- the other day on the TV saying now in California there are 39 million people here in the State of California needing, not primarily oil. Yes, we become -- we're relying on oil, but the thing that we need more than we will always need when the oil

is long gone, we will still need the most precious thing we have, which is water. Along came the pesticide industry and they said oh, we will take care of the seven billion or the -- there were about three billion people then. And they began to produce these chemicals and they poured them into our soils and they began to ruin our water system horribly.

Rachel Carson (phonetic) came along and began to -- she gave this book that began to cause many of us to become aware of this. To make a long story short, I will sum it up by saying, your system of dealing with this aquifer, which is very questionable. People have brought up very good points. We'd better be safe than sorry because water, we will always need. We can get along without oil because we did it for thousands of years. And so my particular position on this is, let's save the water. Let's just not say, Let's pour these contaminants into the system and forget about it. It won't work that way. Let's be concerned about our most precious ingredient, which is water. That is what we're all composed of mainly. 0063-1

MS. ABEL: (Inaudible), followed by Janet Levins (phonetic).

UNIDENTIFIED SPEAKER: What?

UNIDENTIFIED SPEAKER: We can't really hear the

names back here.

UNIDENTIFIED SPEAKER: She said they couldn't hear the names back there. She said they'd like for you to repeat who is coming up next.

MS. ABEL: We will start with Ted Gore or Kay, Central Coast Environmental Protection, followed by Janet Levins.

UNIDENTIFIED SPEAKER: Do you have a microphone?

MR. BISHOP: Sorry, the microphone doesn't work. There's feedback, so we apologize.

UNIDENTIFIED SPEAKER: Why don't you read it?

MS. HOWLAND: Supervisor Bohlen, Chief Deputy Director Bishop, Mr. Iverson, ladies and gentlemen, thank you for the opportunity. My name is Lorinda Howland, H-o-w-l-a-n-d. 0064

I'm a property owner who lives in close proximity to the Arroyo Grande oil field. This is a learning process for all of us in regards to who the players are, who's affected, and I think that the neighborhood around the oil field will be tolerant if we have hope that we can be sure our drinking water will be safe. But how is it acceptable for an exemption to be made to benefit oil drilling? 0064-1

In my surrounding residents and

businesses that share the surrounding water, how can we be sure that there is no interconnection hydraulically between the aquifer that you're trying to exempt and the surrounding community?

With the current drought, the neighborhood surrounding the oil field has seen that water table drop. On my street alone, two wells have been drilled in the last year in order for the property owners to continue benefitting from the use of this water. And even with the forecast for a strong El Nino this winter, how fast can we expect our aquifers to be replenished? 0064-1

My neighborhood is being used for agriculture. Cattle, goats, horse and sheep can be seen grazing nearby. There are fields of crops that can be seen along the roads less than a mile from the oil field. And there is a big local trend to get farmland certified. California certified for organic agriculture. A certification requires strict standards as far as what is on the land currently, and what is going to be put on the land.

The public demands organic produce for the very reason that they don't want chemicals. They don't want poisons to be put into their food. We have residents from all over who go to farmer markets

locally to buy produce from the farms that are in the surrounding community.

How do chemical substances that will be legalized with an exemption of two Safe Drinking Water Act impact a neighboring farmers' desire to become certified organically? What chemicals are being dispersed into this aquifer? What chemical pollution will be legalized with the exemption to the Safe Drinking Water Act? 0064-1

The Arroyo Grande oil field may have a hundred-year history. However, San Luis Obispo County has changed dramatically in that time frame. Our economy has rapidly developed into the third largest winery in California. We need to showcase our fine countryside to keep pace with this growth. Having an active oil field that often reeks of hydrosulfide less than five miles -- fewer than five miles from the San Luis Obispo Airport is not the welcome we want to present to tourists.

MR. IVERSON: Time is up.

MS. HOWLAND: Thank you.

And we want tourists to enjoy the diverse selection of wines in the central coast, including those from Edna Valley, ADA, which borders these oil fields.

We ask that you please consider these points and not apply for an exemption for this aquifer. Thank you for your consideration. 0064-1

MR. BOHLEN: Thank you.

Ted Case. I think that is, followed by Janet Levins and followed by Trish Wilson.

MR. CASE: My name is Ted Case, C-a-s-e. I'm the leader of Central Coast Environmental -- 0065

MR. BISHOP: Would you speak into the mike, please?

MR. CASE: Yeah.

MR. BISHOP: Thank you.

MR. CASE: I have a couple of questions about the presentation and then I have some comments.

My first question is the steam injection, are chemicals added to that? A number of the speakers alluded to the chemicals being added to the steam to enhance the reduction and viscosity. What chemicals are used and what amounts are they used and are they eliminated by the reverse osmosis when they are put back into the Pismo Creek? 0065-1

MR. IVERSON: I believe --

MR. BISHOP: I'm sorry, we're not here to answer questions. We will take your comments and we will consider them but this --

MR. CASE: Well, my comments are predicated on the answers to my questions.

MR. BOHLEN: So the answer to that question is no. There are no chemicals that are added to the steam. The actual water is cleaned up so that the steam is relatively, by oil field standards, clean.

MR. CASE: Okay. Thank you.

The other question I had related to a point of confusion I have from the presentation. There was -- it was next to the last slide here. And it was, you gave the date of expected lifetime of this field because every year about 940 acre-feet is going into Pismo Creek. So through time, the field is being depleted in this bowl, and you have a lifetime of 25 years. But the comment made by the speaker was that with additional expansion, the lifetime would be extended, which seems non sequitur -- if I'm interpreting that correctly -- because if you're withdrawing more and more, wouldn't the lifetime decrease?

0065-1

MR. BOHLEN: I don't know the answer to that question. Well, a lot of it depends on the price of oil. There are many, many factors that are beyond our control, and I think that --

MR. CASE: Well, let me skip on water because

we have a lot of speakers who are going to talk about that. I want to talk a little bit about air pollution.

MR. BISHOP: Well, I -- that's fine. You can talk about air pollution. We don't have any control over the air pollution.

MR. CASE: The air pollution is produced by the steam-injection wells. If you -- that is as a by-product of oil and water coming out of those wells, there are also gases. That is why there is the sulfur dioxide smell. That is why there is hydrogen sulfide. So what safeguards are there? What monitoring is there? OSHA requires monitoring for the workers at the plant. That is not shared with the air control -- the Air Pollution Control District here.

0065-1

The Air Pollution Control District in SLO has no monitoring for those toxic chemicals. There are no monitoring stations. The only monitoring that is available from the by-product, gas by-products from this are when people call and complain. And that data is only available to the public if we do a California public record request. And if we want to get the OSHA data that Freeport-McMoRan won't give us, we have to do a Freedom of Information Act request. So the public is kept in the dark about the --

MR. IVERSON: That's three minutes.

MR. CASE: -- about the consequences to our public safety through air pollution produced by this activity. Thank you.

MR. BOHLEN: (Inaudible) Levins, followed by Trish Wilson, followed by Rebecca August.

UNIDENTIFIED SPEAKER: She will be here near the end.

MR. BOHLEN: Okay. Trish Wilson?

UNIDENTIFIED SPEAKER: Rebecca August, followed by Wesley St. John, followed by Joey Recono (phonetic).

MS. AUGUST: Hi, my name is Rebecca August, A-u-g-u-s-t, like the month. 0066

I want to say that this is such a great opportunity to be so engaged in your water and concerns about your neighbors and your resources. I'm from Santa Barbara County. I live just a couple of miles from one of these illegally injected aquifers. There are 11 in our county, so I'm very concerned about what happens with this well and how you deal with what is happening here. 0066-1

My family drinks from our well, and we depend on it for our existence and like I said, we live a couple of miles from one of these injected aquifers.

I realize it is really expensive to dispose of toxic waste, and that there is only so much

little droplets of oil left in our county. But we can't keep expanding the polygons to get bigger and bigger, and bigger because we're just going to force everybody out here and there will be no place for us to live.

0066-1

San Luis Obispo aquifer should not be exempt from federal protection. It is already protected; just because it's been illegally violated does not mean you should exempt it from protection. You shouldn't exempt any aquifers in California that are exempted, federally protected. There is a reason why they are federally protected. We need them. Thank you.

MR. BOHLEN: St. John, followed by Joey Recono, followed by Michael Law.

MR. RECONO: Sorry, Joey Recono. Thanks for holding this dog and pony show for us.

0067

You know, there was an experiment that was done and the experiment takes a petri dish and it puts bacteria in the petri dish. That bacteria is us. And then you take a little bit of alcohol -- and you -- alcohol and you put an eyedropper of bacteria in the center, and the bacteria represents us. And what happens is the bacteria, it's sugar. And it eats its way out and it eats the sugar. And on its way out,

what it leaves in the middle is waste product, which is alcohol. And then in the end, what happens is the bacteria eats all the sugar and dies in its own alcohol.

Now, the law of finite resources, you know, we are on a rock floating around in the middle of space. And what these people want to do, is they want to inject the water that they say is not important, with their industrial waste. And it is not like this meeting is really about asking for permission. Okay, because these people have already gone and done it.

0067-1

There is a green line here, and this green line shows where the exemption already is. And they have already gone past it, and they are already drilling out there. What they are here to do, is they are here to ask the Water Board and DOGGR to be complicit in their crime that they have already committed. And it really is amazing that you would even come here before us to consider being complicit in a crime that has already been committed.

Thank you for this opportunity.

MR. BOHLEN: So we get to hear from Wesley St. John. Is that who you are, sir?

UNIDENTIFIED SPEAKER: No.

MR. BOHLEN: Wesley St. John? Michael Law,

followed by Jeanne Blackwell.

MR. LAW: I'm a long-time resident of San Luis Obispo County. I have seen the changes. The creeks are no longer flowing and wildlife is disappearing. The oak trees are dying because of the drought. I have seen my well out in Huasna Road go from 18 and a half gallons a minute to now 500 gallons a day. So I'm losing my orchard that I've put thousands of dollars into and hoping and trying to keep it alive until this El Nino happens. But if we don't get that, I will lose all my trees. 0068 0068-1

What my concern is, our water is so important. We cannot jeopardize it at all because there is not an infinite amount of it. There is just so much of it, and it needs to be protected. I do not like the idea of sharing our aquifers of water with chemicals that can later on end up in liver cancer, all kinds of tumors in our bodies. It just doesn't make sense. We only have one planet and that's it. Thank you.

MR. BOHLEN: Jeanne Blackwell, followed by Maya Golden-Krasner.

MS. BLACKWELL: Jeanne Blackwell, B-l-a-c-k-w-e-l-l, a SLO resident. 0069

Mr. Bohlen, I can sympathize with you on

what you and your agency must be going through right now. You kind of have the rug pulled out from underneath you. Top directors fired and resigning. Governor Brown pulling people from your workforce. The EPA coming down on you to implement the underground injection control program with no additional manpower or funding made available.

While all this is going on, State mandating EIR conducted by the California Council on Science and Technology, reports that there are serious compromisable data breaches from the oil industry that you were relying on to satisfy reporting requirements under a very loosely defined and flawed UCI program. 0069-1

To further compound an already messy situation, CCSG recommended policies that would require instrumentation and technology even they admit is not yet available. Case in point, instruments that can accurately measure, track, record what is happening subsurface underground is three years down the road.

If this hearing is about getting feedback from the public on a project that is going to impact our lives and livelihood, then I do have some concerns I hope that you will be able to address.

The aquifer in question at the Arroyo Grande oil field seems to have this very ghostly

quality about it making it all but impossible to nail down its exact location and status. If you are sincere in your efforts to make an informed, legally binding decision here, and instill a level of confidence crucial to implementation, it would behoove this board to produce the documents describing in detail the aquifer in question and subsequent water tests. 0069-1

I'm of the opinion that these documents can only be produced by a third-party independent certified contractor that is able to produce his findings based on his data. To proceed on hearsay and undocumented data and unreliable sources, jeopardizes the whole intent and purpose of this hearing, and I dare say, only compounds an already convoluted situation.

Since back in March, you started, Freeport, illegally injecting wastewater into a protected aquifer. It is imperative that the data and documentation of the water test from the actual aquifer in question be produced before any extension can be considered. It is not unreasonable to be expected to produce documents for public scrutiny on which you will be basing your decision. It is also crucial to the validity of these hearings to show the findings of the aquifer as it existed prior to the steam-injection

process.

We are talking about making a life and death decision here where the safety and well-being of an entire community for generations to come can and will be affected. We cannot be too sure, too careful, and every precaution taken, facts and data checked and rechecked for the very simple reason, water is precious, scarce, and there is no substitute. Thank you. 0069-1

MR. BOHLEN: Thank you.

MS. ABEL: If you please will not clap. Just use your hands. Thank you.

MR. BOHLEN: Maya Golden-Krasner, followed by Mary Plavin (phonetic).

MS. GOLDEN-KRASNER: Maya Golden-Krasner. 0070 Golden is G-o-l-d-e-n, hyphen, K-r-a-s-n-e-r.

I'm a climate staff attorney at the Center for Biological Diversity, and before I start, I just want to reiterate the previous request that the comments online be extended in order to give people an opportunity to include the information that they learned here tonight.

At the outset of my comments, I want to acknowledge that this application is happening for several reasons that are not discussed in the

application but should.

First, as people have mentioned, DOGGR have been allowing thousands of wells to inject -- illegally inject wastewater into protected waters of the State Drinking Water Act. And EPA has now ordered DOGGR to figure out how to fix it.

Making legal what is and has been illegal is not the correct way to move forward. All injection into nonexempt portions of the aquifer are currently in violation of the State's drinking water act and must stop immediately. 0070-1

Second, this exemption is necessary to accommodate a much larger expansion project that involves expanding to add up to 450 new wells, an increase in production of up to 10 times current production and to move the oil through a brand-new pipeline that was quietly passed through the county with a minor use permit. And which runs down residential streets and over waterways to the Phillip's 66 refinery.

Not only had this large project been piecemealed to avoid full public scrutiny, but the fact that this is one massive project has to be acknowledged and analyzed in this aquifer exemption application. But there is no analysis in the application of what

will happen to the aquifer if oil extraction increases tenfold. It must answer at the very least, but really much more.

How much wastewater will this new project produce? Where the wastewater will go and the effects of that disposal on the aquifer and the environment.

There are other reasons that this application is deficient as well. There are at least a hundred water supply wells within this oil field, but the application doesn't show maps and application or sampling of these wells. It does not map water flow. It does not evaluate any types of earthquakes, including those that could be caused by wastewater injection. It doesn't evaluate whether there is potential for subsidence as water is pulled out of the aquifer, especially with the de-watering project that is occurring simultaneously. It does not provide analysis of the chemical composition of the wastewater injected back into the aquifer as wastewater or steam.

0070-1

For these reasons, DOGGR must exercise its discretion and reject the exemption. In this time of historic drought, California needs all the water it can get and DOGGR cannot at this time afford to sacrifice it for the convenience of the oil and gas industry.

Therefore, not only must the application be rejected, but all illegal injection into the nonexempt portion of the aquifer must stop immediately. Thank you.

0070-1

MR. BOHLEN: Thank you. (Inaudible), followed by Damon Nagami. Is Mary here? Okay, Damon.

MR. NAGAMI: Good afternoon. Damon Nagami, N-a-g-a-m-i. I'm a senior attorney with the Natural Resource Defense Council.

0071

Thank you for the opportunity to provide comments on this aquifer exemption today. We are planning to submit written comments before the deadline, but I just want to give a couple of thoughts.

At the outset, we need to state our objection to the idea of aquifer exemptions at all. But also to the inadequate and outdated criteria that are used to evaluate aquifer exemptions. The criteria lack of basis in science should not be relied upon to exempt our dwindling and drought-threatened drinking water. The EPA criteria are from the 1980s and treatment technologies have been much improved since then. We also object to a situation where aquifers might not have originally qualified for exemptions, but the operator has now created pollution that brings the aquifer within those criteria. So now

0071-1

the aquifer is contaminated with hydrocarbons and qualifies. This whole system is unfair and contrary to the intent of the Safe Drinking Water Act.

And even under EPA's criteria, much less than more stringent State criteria, this aquifer proposal does not qualify, should not proceed. Under 40CFR 146.4A, this criteria has not been met. The applicant has not shown that the aquifer is not currently a source of drinking water. There is not enough information in the application to make this shown. Nor does the application show that the aquifer is currently producing or capable of producing hydrocarbons. 0071-1

We are pleased and we commend the department and the Water Boards for not moving forward with any aquifer exemption proposals for wells with TDS, total dissolved solids, under 3,000 -- under 3,000 and injecting into nonhydrocarbon-bearing zones. We urge the department and the Water Boards to hold the line and not put forward any applications for exemption in that category before the deadline.

But as to this aquifer exemption, we believe that DOGGR and the Water Board should withdraw the application and not submit it to EPA. Thank you.

MR. BOHLEN: Thank you. Laurie Connelly

followed by Natalie Beller, followed by Rebecca Klassen. Laurie Connelly?

0072

UNIDENTIFIED SPEAKER: Laurie left.

MR. BOHLEN: Are you Laurie?

MS. BELLER: Laurie is my mother, and she had to leave to take my niece back home. May I read her comments?

MR. BOHLEN: Yes, of course.

MS. BELLER: Thank you.

Freeport-McMoRan just listed the Price Canyon oil fields along with oil fields in Los Angeles and San Joaquin basin for sale. The asking price is 5 to 6 billion dollars.

0072-1

They have no long-range interest in this community. Whether it turns into a wasteland or if, myself or my neighbors get hurt, is of little concern to them. They plan to be gone as soon as they can make the sale. Don't make our county another example of what can go wrong with oil extraction. We have enough in our nation already. Just look at the brine water spills in the past 10 years. Montana, North Dakota, Texas, and right next door to us in Bakersfield, California. Please deny this request for exemption.

MR. BOHLEN: Thank you. Natalie Beller? Are you commenting yourself?

MS. BELLER: I'm Natalie Beller.

MR. BOHLEN: All right. You get to comment yourself. You're up next. Good job.

MS. BELLER: Natalie Beller. B, like boy, e-l-l-e-r.

I feel like the luckiest woman to live where I live in a canyon in south San Luis Obispo County, overflowing with thousands of sturdy, wise old oak trees. It was a dream come through when my husband, Jonathan and I, bought our little acre parcel full of oak trees and a creek running through it. But now we are considering leaving this dreamy little acre because Freeport-McMoRan is endangering our health and safety. 0038

One earthquake could rupture the oil pipeline that is being installed right above our drinking well. Or perhaps an equipment malfunction will spill the toxic brine water into our drinking water or into the aquifer from which our neighbors drink or into the creek that runs through the oil fields. 0038-3

The Price Canyon oil field is using steam injection to pierce the earth, which is as dangerous as fracking in many ways. They both pull 10 barrels of toxic brine water from deep in the earth for every one

barrel of oil that is extracted. The chemical composition of the steam injection brine water is nearly identical to that of fracking brine water. Brine spills are more difficult to clean up than oil spills.

Our local newspaper, the Tribune, published an Associated Press article on brine spills just two weeks ago. Ranches in Bakersfield have been turned into wasteland. And an entire town in Montana had to be shipped drinking water because theirs was ruined by a brine spill. Those are just two examples of the 4,000 spills that have occurred in the U.S. in just one year, just 2013.

0038-3

We, in this community, are now threatened by oil and brine spills that can contaminate our drinking water wells. We all know how toxic oil spills are to human, plants and animal life. We're learning how toxic brine spills are.

I would love to stay living in my beautiful home, but it's not worth the risk of my good health, my husband's or our four-year-old daughter's. Currently there is no real-time monitoring or even daily monitoring of the aquifers in this area. And so I ask you to deny this request for exemption.

In the Associated Press article that I

referred to earlier, an audit of all the brine water spills showed that most of the spills occur during the extraction process and some with the truck transportation or containment pits and pipeline leaks. The two main reasons for the spills are, one, equipment failure and two, human error. As hard as we may try, there is no way to eliminate those factors. 0038-3

Thank you.

MR. BOHLEN: (Inaudible) -- followed by Jonathan Beller, followed by Ed Hazard. Rebecca, is she here?

UNIDENTIFIED SPEAKER: Rebecca left.

MR. BOHLEN: Okay. Jonathan Beller. 0073

MR. BELLER: J-o-n-a-t-h-a-n, B-e-l-l-e-r.

Well, I think everything has pretty much been said at this point. I just want to say that I oppose the aquifer exemption. And I notice there is some language here in this guidance document, and it says that the aquifer exemption will be made on a case-by-case basis and will not be based on this guidance document. 0073-1

So what that tells me is that even if you can prove that all this brine is contained, DOGGR still does not have to approve this, or the State Water Board, I don't know. So you could listen to your

constituents and deny this exemption.

MR. BOHLEN: Ed Hazard, followed by Pat Connelly, followed by Richard Teffle (phonetic).

MR. HAZARD: My name is Ed Hazard, H-a-z-a-r-d.

0074

My family and I are California oil and gas mineral owners, and I'm president of the California Chapter of the National Association of Royalty Owners. There are over 600,000 private citizens that own the oil and gas mineral rights in this state. And we, as citizens, are as concerned as anyone else that oil production in this state is done efficiently and in an environmentally sound manner. We need regulations that are effective but reasonable and that are enforced. Without enforcement, regulations do no good.

0074-1

We support this project because we understand that mineral owners have a right to extract their minerals. Without that right, we will have the property taken from us. And this oil field produces more water than it does oil. It seems to me there is a lot of misinformation out there and with what I see in the media and here, I would be as concerned as some of these people are with this project. But knowing what I know, it appears to me that they are actually cleaning the water up and putting it back, and they are producing water for a useful purpose by putting it down

Pismo Creek.

I also trust the people that the governor has now put in place with the Division of Oil and Gas, the Department of Conservation, et cetera. You have an incredible amount of expertise at your disposal. I appreciate you using it. It appears to me that you have done so in this case. And I urge you to approve this exemption. 0074-1

Thank you.

MR. BOHLEN: Pat Connelly?

UNIDENTIFIED SPEAKER: He left.

MR. BOHLEN: Okay. Richard Teffle?

UNIDENTIFIED SPEAKER: He left, too.

MR. BOHLEN: He left. How about Jean Reeves?

MS. REEVES: I'm here.

MR. BOHLEN: Okay. And after Jean, Suderman, Diane Suderman, maybe.

MS. REEVES: Hello. Before I start my statement that I've prepared, I want to comment on some facts from the U.S. Geological survey at --

MR. BISHOP: Excuse me, I don't mean to interrupt, but could you state your name again, and spell it.

MS. REEVES: Jean Reeves, R-e-e-v, v as in Victor, e-s. 0055

MR. BISHOP: Thank you.

MS. REEVES: Okay. So at USGS dot gov facts, the largest earthquake induced by fluid injection had a magnitude of 5.6.

Is there any possibility that wastewater injection activity could increase the fault to trigger a major earthquake that causes extensive damage over a broad region? We cannot eliminate this possibility.

We are near Diablo Nuclear Power Plant. Are we playing Russian roulette here?

0055-1

How does the injection of wastewater cause earthquakes? The injection -- the injected wastewater counteracts with the frictional forces on the faults, and in effect, pries them apart, thereby facilitating the earthquake slip.

One of the aquifer boundaries is a fault. I'm so confused as how it can be. Is it possible to anticipate whether a planned wastewater disposal activity will trigger earthquakes that are large enough to be a concern? There are three conditions that must be met for injections to induce an earthquake. One, pressure of a fault; two, stressors acting on the fault favorable to slip; and three, pathway for the pressure increased from injection to interact with the fault.

Evidence from some case history suggests

that the magnitude of the largest earthquake tends to increase as the total volume of the injected wastewater increases. This project intends to expand.

So I urge the State, in compliance with the Federal Safe Drinking Water Act, to immediately order that the oil wastewater injection be stopped at the Arroyo Grande oil field. I object to turning this aquifer into a sacrifice zone for the oil industry injection well and wastewater disposal, as Patrick Zofen (phonetic) from the Center of Biological Diversity puts it.

0055-1

There are at least a hundred water supply wells within a mile of this oil field, but the applicant didn't show exact map locations or samples of these wells.

MR. IVERSON: Ms. Reeves, your three minutes are up.

MS. REEVES: Okay. There are many people who live near the oil field that are very concerned about their well water. The applicant doesn't evaluate the impact of earthquakes, evaluate whether the potential for subsidence as water is pulled out of the aquifer creating sinkholes, providing analysis of the chemical composition of wastewater injection back from the aquifer.

The three-part McMoRan application fails to disclose the company's own plans to dramatically expand the operation in this same oil field. The company is hoping to drill 450 new wells, including injection wells in Phase 5 to increase 10 times the daily oil production. There will be a planning commission hearing on phase 5 in 2016, according to the coordinator for the project, which would, of course, also result in a major increase in water injection and wastewater production.

0055-1

The analysis of the aquifer exemption is based on current water obstruction injection. Nowhere does the applicant mention that the company is pursuing this oil field expansion project. There is no analysis of what will happen to the aquifer if the expansion proceeds, including possible changes in pressure, potential for inducing fractures and water quality slash chemicals that will be used, et cetera.

MR. BOHLEN: Could you please finish up.

MS. REEVES: Okay, yeah. Sure. The -- I'm skipping a lot of stuff. I will just give it to you.

MR. BOHLEN: You can submit written comments. We will be reviewing those and evaluating them.

MS. REEVES: Yes, I will. Okay. So therefore, the agencies have not shown that the aquifer is

isolated from -- oh, the agency -- the agencies only did a superficial review of the aquifer. Therefore, the agencies have not shown the aquifer is isolated from other sources of groundwater, and that it won't harm other sources of groundwater and is currently used as a drinking -- and not currently used as a drinking water source or could never be used as a drinking water source. So okay, well, I can't possibly --

0055-1

MR. BOHLEN: Thank you very much. We will be interested in getting your written comments. Thank you.

MS. REEVES: So I will give it to the lady outside?

MR. BOHLEN: Yes. Diane Suderman?

MS. SUDERMAN: Suderman.

MR. BOHLEN: Suderman. Sorry, my apologies.

MS. SUDERMAN: No, that's fine.

MR. BOHLEN: Followed by Kurt Sutherland.

MS. SUDERMAN: Suderman, S-u-d-e-r-m-a-n.

0075

Diane Suderman.

I'm going to mix this up a little bit. I'm a liver transplant patient. About a year ago, I had a liver transplant and they said to me, "What toxins were you exposed to," both at Stanford and UCLA. And I said, "You tell me."

We talked about the chemicals that were put into the environment to kill whatever, that is killing us. The oil, the fracking, the drilling, the chemicals that are used with that. I am sick and tired -- thank you, Lord, for free speech -- of our earth being raped and pillaged, all for the sake of greed, the almighty dollar. 0075-1

As was said here before, these companies are billion-dollar companies. They don't care about us. They don't care about San Luis Obispo County, San Luis Obispo -- they don't care about us. And this particular thing that they are trying to do causes more earthquakes than fracking. It's prone to cause more earthquakes than fracking.

We are on fault lines here, people. I mean, I can't even imagine considering this. I can't -- I mean, it's mind-boggling. I think I'm not a stupid human being, and I wonder sometimes are people getting paid off. Why? Why in God's name would this be allowed? It's my opinion.

You know, I have a new liver. But -- yeah, I'm grateful for that, but I don't want my daughter to have to have a new liver because of these chemicals, and this -- it's mind-boggling. I just have to say, you know. And I don't think this should be

approved. I think that it's ludicrous to even consider it. Not just because of the water.

I mean, California is shrinking. My house is getting more cracks every day because of the groundwater is going down. I had an architect come and look at my house, and he said the groundwater. It's the groundwater that's disappearing so we are going to let it disappear in a much greater rate? It's ludicrous. That's all I have to say.

0075-1

MR. BOHLEN: Thank you. Kurt Sutherland, followed by David Watson, followed by Ginger Lordus.

MR. SUTHERLAND: Good evening. Kurt Sutherland, S-u-t-h-e-r-l-a-n-d.

0076

I live approximately two miles away from Price Canyon. I do want to thank you for this presentation. I feel, personally, like I need a lot more information so this is a good start for me. And probably a lot of us would agree that it is not just oil that we're against. It's contamination.

I drive a car. I use plastic products. I'm trying to decrease that. I'm trying to be more aware and wise with my decisions, but I use oil. So I'm not against oil production. However, I'm not convinced with what I have heard today that permeation can be completely guaranteed that it will not occur.

0076-1

And it seems to me it's not so much the issue of the overspill of the bowl but of leaking and permeation.

How can -- or can we have a guarantee that this wastewater in the aquifer will be completely contained? I didn't here any guarantee today. I heard such qualifiers such as low -- there are low levels, I heard once or twice.

One of the questions I have is perhaps it would be interesting to know how many employees live around the area and either need the water for consumption or agricultural production. I'd like to know how many of them -- if there are any and if they're concerned about it. 0076-1

Also, I really appreciate hearing from -- I appreciate having heard from professionals, but I really would like to hear if there are any Cal Poly biology or chemistry or soils professors who can assure us that permeation is out of the question. That it won't happen.

It's -- I went to Cal Poly and I was an agriculture major, and every science class that -- or chemistry class that I can remember -- this was a while ago. It's 30 years ago. But permeation is in great part connected to a gradient, and even though you have done some studies to show that there is a bowl figure,

have you completely gone around the entire bowl to assure us that there is no possibility of a leak or transfer of chemicals from one aquifer to another? How is that possible unless you could send a mole or a gopher around the entire place to assure us that every -- and I got here late so I'm sorry, I may have missed some terms that the --

0076-1

MR. IVERSON: It's been three minutes, Mr. Sutherland.

MR. SUTHERLAND: Okay. I will start to wrap it up then.

It just does not seem logical to me that my drinking water or anyone's drinking water is guaranteed to remain safe, where the water will go and that it won't permeate. Thank you.

MR. BOHLEN: Thank you.

Dave Watson, followed by Ginger Lordus, followed by Debbie Peterson.

MR. WATSON: My name is Dave Watson, W-a-t-s-o-n.

0077

I'm here on behalf of the property owners that adjoin to the south and southwest of the applicant's property, about 550 acres in total. This property includes a 100-acre producing vineyard, and it includes 16 residential lots. Those are changed

circumstances from when this original exemption was put in place, and is something we would hope you would take into consideration as you consider the application.

My concern today deals with protecting the groundwater quality of my clients' property. The issue that I'd like to talk a little bit about today is trying to understand from the application and the exhibits exactly where the expanded boundary and the exemption areas, particularly the south and southwest, fit with not only the wells that have already been drilled but the wells that are planned in the phase 5 project which will expand the operation, facilitated essentially by this request for expanded exemption. 0077-1

The exhibits are hard to understand. I generated a few. In parallel to this, we have been talking with and pursuing the County's project that they are considering at this point for time extension with the phases to deal with the wells that we're dealing with now, as well as the application that's pending.

If I understand the geologic analysis -- and I will be the first to admit, I don't fully -- but if I do understand what Freeport is trying to tell you, our water extraction zone is above the oil extraction zone that they're using. From what I can tell from the

drawings, the groundwater basin that we rely on is within a thousand feet of the exemption boundary that is presented for you today.

And my concern really deals not with what we're doing today, but if we begin to have problems with our water wells and our water source, the only place we can go is further down into the Pismo Formation. So my concern deals primarily with what is happening along this new expanded boundary and to the extent that that boundary is approved by you, what potential there is for contaminating the areas in which we may ultimately have to pursue additional water should our water wells dry up or become compromised. 0077-1

What I would ask you to do today is if you're going to move forward with this application, I would ask you to strongly consider additional sentinel wells along the boundary of the new exemption area. And I would ask you to develop a protocol for annual reporting, both of which should be available to the public, easily accessible on somebody's website and something that we would have a chance to feel either more assured about or raise concerns that you can then address.

The exhibit that is on the wall that I have been looking at for the last half hour, doesn't

make reference to the recommendations of the State Water Board that there be a rigorous monitoring program. I would certainly encourage you to consider that if in fact you do move forward. Thank you.

0077-1

MR. BOHLEN: Ginger Lordus?

MS. LORDUS: Lordus.

MR. BOHLEN: Lordus. Okay. Thank you.

Debbie Peterson is next.

MS. LORDUS: Good evening. My name is Ginger Lordus, L-o-r-d-u-s.

0078

I became aware of this project, not because I was falling asleep and not listening to the news and reading my mail, but because there was so much activity going on in Price Canyon, and because the sulfur smell kept increasing on our property, which is about a mile from this project. I also noticed that the pond water that I had on my property was growing algae at a rapid rate and I began to wonder what was going on.

0078-1

Well, I agree with a lot of the comments that were made here, and I am opposed to any expansion, exemptions, directional drilling, and pipeline carrying peanut butter-size oil right down the road from where I grow and from where I -- where I see sinkholes happen all the time on Old Park Road.

My property value and my health is at stake. I'm a registered dietician and I'm familiar with what happens with the genome when we're exposed to environmental situations and the potential hazards that it has on our bodies, but I'd like to address two things that I don't believe has been addressed yet.

One is the language that the State and the Water Control Board used in their letter for supporting this project. The ambiguity in this is just astonishing to me. So area of approximately 1.5 square miles. It appears that the proposed expansion area does not serve as a source of drinking water and injected fluids are not expected to affect the quality of water. And as long as the conditions described below are satisfied for current and future underground injection control, any injected fluids in the proposed exemption area should also be contained.

0078-2

And so my rebuttal to that is natural disasters, human error for which we're all responsible for, negligence, insufficient fines. I'd rather pay a fine than have to deal with some of this, or lack of legal consequences by the EPA or self-regulating agencies monitoring are all possible causes for decreased water quality and property values related to this project.

The other area that I want to address is when I bought my property in 1998, there was an attachment to my deed that I found very fascinating. And it said "Excepting therein for, a half of all oil, gas, hydrocarbons, minerals and oil mineral rights under said land lying below the depth of 500 feet of the surface," is basically mine. So I'd like to know where I can go to get my check. And putting those two together --

MR. BISHOP: Excuse me. Use the mike, please.

MS. LORDUS: -- I think it's essential that if you honestly and genuinely believe that this is a safe project, I'm behind you all the way. But I would like to have contractual agreement, with me as a property owner in the area, saying you will be more than happy to pay me the current property value of my house should I decide to sell if at this point in time or in the near or distant future it becomes a problem, I'll sign on. Thank you very much.

0078-1

MR. BISHOP: Thank you.

MR. BOHLEN: Debbie Peterson, followed by Bailey Smith.

MS. PETERSON: I'm Debbie Peterson, D-e-b-b-i-e, P-e-t-e-r-s-o-n.

0079

I'm the former mayor of the city of

Grover Beach, and we paid a whole lot of attention to water because 60 percent of our water comes from wells in our town, and we can't draw that water anymore because there is no longer enough there to draw it without going too far below the sea level and risking saltwater intrusion.

And I think it's disingenuous for the State to craft a rule that separates drinking water from agricultural water because they all come from the same source, and in a population growth, more and more residents need both ag water and drinking water. 0079-1

Our cities have just commissioned a very expensive study of our aquifers. And that study will give a lot more information on how to compose and should be ready before too long, probably within the year. That will update the information that you're using to make the recommendation. So I'm asking, please, don't make your decision without having updated science when it is so soon available.

As you have heard today, oil companies have a devastating record in our county. And one that most of you don't know about is that between the 1940s and the 1980s, 18 to 19 billion gallons of diluent -- and that's the benzene and the really nasty chemicals that are used to dilute our tar-like oil so that it

will flow -- leaked into our coastal dunes. They permanently destroyed the upper aquifer in the coastal dunes. Permanently destroyed it.

So adding insult to injury now, they're also drawing water from the aquifer which flows to the ocean when they are done using it and doesn't get put back in. And that is what we're seeing here, it doesn't get put back in. So we have no basis say for trust.

And I would say to both the State and to the oil companies, if you would like us to trust you, do something that gives us a reason. Put the water back in the aquifer, and maybe then, if you could mitigate some of the damage, we will have a little more confidence and be a little bit more open-minded.

0079-1

MR. BOHLEN: Bailey Smith? Bailey Smith, followed by Ash Lauth, followed by Steve Ling.

MR. SMITH: Thank you for being here this evening. I'm Bailey Smith.

0011

I grew up about 3,000 feet from the Price Canyon oil fields.

MR. BOHLEN: Can you speak up, sir?

MR. SMITH: My name is Bailey Smith. I thank you for having this hearing tonight, and I appreciate the opportunity to participate in this political

process discussing the geological impact of the aquifers in our neighborhood.

I personally witnessed oil and steam from some sort of steam-injection eruption in the pasture of the farmhouse where I grew up. And I am more concerned about the -- whether or not three- to seven- to tenfold increase in the amount of injection system wells that would potentially impact even greater, something that is already considered outside of the boundary of the exemption of the aquifer.

At this point, as the -- it's very hard to trust what you're saying. Especially since the information that has been provided seems spotty and has been called into question in a variety of different ways.

0011-2

We please ask that you halt the approval or delay the approval of this aquifer exemption until further evidence is proved to the extent that we're not going to be required to serially exempt a greater and greater aquifer from this impact of this oil field operation.

At this point, it seems like basically what has happened is everybody said, oops, we messed up. Let's try to get through this one and then through this one and get on to the next business operation and

then see if anybody notices. And essentially, the people who live here are, at this point, in our minimal political operation, are voicing our concerns to be able to call into question that you can provide us with a reasonable assurance or trust that what is happening is not going to keep getting worse.

0011-2

MR. BOHLEN: Next is Ash Lauth.

MS. LAUTH: My name is Ash Lauth, L-a-u-t-h. Thank you very much for your time today. I'm with the Center for Biological Diversity.

0080

If you committed a crime and it was clearly a crime, you wouldn't expect anyone to go back and rewrite the law in your favor. That is exactly what is being proposed right now for the oil and gas industry in San Luis Obispo County.

The reason Freeport-McMoRan is applying for an exemption is because it has been discovered, along with other oil companies throughout the state, it has been illegally injecting oil waste into potential sources of drinking water in violation of the Safe Drinking Water Act.

0080-1

The industry has the audacity to ask for a free pass to exempt the county's aquifer from the protections it already has, and basically declared a sacrifice zone. A move that would set a dangerous

precedent for the thousands of oil and gas wells operating illegally across California.

There are at least hundred water supply wells within a mile of this oil field. The application didn't show the exact map locations or sampling of those wells. The application also doesn't evaluate the impacts of earthquakes, evaluate whether there is potential of force of subsidence as water is pulled out of the aquifer, provide an analysis of the chemical composition of the wastewater injected back into the aquifer.

0080-1

Freeport-McMoRan's application utterly failed to mention the company's own plans to dramatically expand operations in the same oil field. The company is hoping to drill up to 350 brand-new wells, including injection wells, to achieve up to a tenfold increase in daily oil production. That would, of course, likely also result in a major increase in wastewater production.

There is no analysis of what will happen to the aquifer if that expansion proceeds, including possible changes in the pressure for the potential for inducing fractures, the water quality and chemicals that will be used, et cetera, et cetera.

Rather than ending this illegal waste

disposal and oil production activity, regulators, yourself, are proposing to exempt aquifers so that big oil can continue contaminating our water.

In this historic drought, we don't need a phase with new aquifer exemptions. We need Governor Brown and his regulators, again you, to deny this application, to immediately halt these ongoing illegal activities, lest we bitterly regret an action in the dry decades ahead. 0080-1

It is not clear to me that public comments are really of any consequence to your agency, but it is clear to me that you are at least willing to follow the law and acquiesce to hold a hearing to at least receive them. So I encourage you to continue in that trend and follow the law by immediately shutting down the thousands of wells that are illegally injecting fluids in protected California aquifers as well as hundreds of illegally operating oil industry waste disposal wells.

Thank you for your time.

MR. BOHLEN: Steve Lain, followed by Monique Roheda (phonetic), I think.

MR. LAIN: Hello. I'm Steve Lain, L-a-i-n. 0081

I'm very interested in this discussion. I live on -- or we live on Ormonde Road. Our property

is roughly a mile from the oil field. And one thing I want to bring up was at a previous meeting where Freeport-McMoRan asked for public comments from neighboring property owners in regards to their desire to quintuple the number of oil wells and get our input on how best to transport the district oil to the Nipomo refinery.

At the conclusion of that meeting, the resolve was that a pipeline would be the least intrusive and the safest option. As most of you know, that pipeline is now being built. But what my main interest there is is our water. 0081-1

I don't know if you know, but within the last five years, the local community, Pismo Beach I believe it was, there was a developer that wanted to tap into our aquifer and basically make money off our water. And that was -- we all got together on that one and shut it down. That was a local municipality.

Here, one thing that came from this previous meeting I noted, was that the number of wells they are going to put in, which is up to 500, the amount of liquids that are pumped from these wells, they said that 97 percent of that is basically water. And so the possibility of taking that number of 500 times all this water, you have an issue where what to

do with the water. Well, they want to inject it back in the ground. Well, when you have toxic substances in the water, that does not make us feel comfortable.

Now, I found that other oil operations have implemented a different option -- the other options available. That option would be to recycle the water. And in those cases, the water has -- after it has been recycled, the water is made available to municipalities, to farmers for irrigation use. That seems like a good option to me. I would think that that should be on the table instead of injecting it back in the ground full of toxins. 0081-1

Thank you.

MR. BOHLEN: Thank you. Monique?

MS. ROHEDA: Hello. My name is Monique Roheda (phonetic), and I have three minutes to save the world, so wish me luck. Anyway, bear with me. I'm not a great public speaker. 0082

I moved here about 20 years ago to go to Cal Poly and get an architecture degree, and I was able to do that. I have been working in the architectural field. I have not actually done anything I'm super -- I don't want to say proud of, but I want to do a lot of things that are great for other people in the world and the earth and all this kind of stuff. So I'm working

towards that.

But something I want to bring up, and it's related to everything that is being talked about today, is I grew up in the Central Valley. And I was kind of -- I came about to an awakening when I was about 12 years old at the little elementary school. All of a sudden all our friends started dying. Getting sick first, and they couldn't find out what was wrong with them.

Well, we lived on like five-acre parcels. There are a lot of farm fields out there, a little bit of industry but not much, and we were all on wells. And we found out that there was an old fertilizer company that had moved away, but had illegally buried a lot of toxic material. It went into the aquifer and got into the wells of a lot of people and a lot of our friends that lived closer to the school.

So that is what came about. Families, you know, were devastated, lost families from this incident. And it turns out that not really anyone had -- there was not -- I don't know if they were ever able to go back and find out what happened to go legally after the company, but this is what I'm trying to point out is that things like these things happen. And later on, you don't know until people start getting

0082-1

sick and dying, and I just hope that doesn't happen because no one will be able to point the finger to find who is, you know, the culprit in the end. And that's all. Thank you. 0082-1

MR. BOHLEN: Thank you.

MR. BISHOP: Are there any other folks that have comments that didn't put in a card? Well, then if you don't mind, I'd like to make a couple of comments from what I heard.

MR. IVERSON: Are any of the folks from the list earlier, left?

MR. BISHOP: That's why I asked.

MR. JOY: Yes, my wife, Trish Wilson, was going to read a comment. She's not here yet. Can I go ahead and read it?

MR. BISHOP: Sure, come on up.

MR. JOY: My name is Terry Joy, J-o-y. My wife's name is Trish Wilson. We live less than a mile from the oil field on Old Oak Park Road. This is her statement and my sentiments also. 0083

Regarding the proposal for expansion of the aquifer exemption and Class II injection to the designated area: In the public notice that was printed in the newspaper, the following report appeared. The division of the Water Boards also preliminarily concur

that the injected fluid is expected to remain in the area that would be exempted and is not expected to affect the quality of water that is or may reasonably be used for any beneficial use due to geologic conditions from hydraulic controls.

Those of us who live in the neighborhood near the proposed aquifer exemption depend one hundred percent on our wells for our homes, land and animals. These are wells that we pay to have drilled, treated and maintained with no assistance from governmental agencies.

The implication that injected fluid is expected to remain in designated area and is not expected to affect our water quality, is not guaranteed. The language used is nebulous. There is no data provided to support this preliminary occurrence -- concurrence, which is simply an agreement and opinion between the two agencies.

0083-1

Questions and concerns regarding the aquifer exemption: What is meant when it is written that the quality of water that may reasonably be used for any beneficial use is not expected to be affected? How is it reasonably objectively defined? Where is the scientific engineering evidence that demonstrates to the larger set of stakeholders that this

fluid-injection process is safe for all of those concerned. Especially for those residing in the community where the fluid-injection activity is already taking place.

0083-1

These oil-drilling activities are about more than just environmental impact reports and mitigation factors. They are especially in a period of severe drought also ethical and moral issues. In a period of drought, it is -- is it ethical and/or moral to subject an aquifer used by local residents as a sole source of fresh water to the potential of contamination merely for commercial purposes?

0083-2

Specifically, how is the potential for seepage of the injected fluid into local water sources being mitigated? How do we know that process is safe? What is the evidence? Where can it be accessed? Who conducted the studies? How and when has the oil company communicated their justifications, confidence and ethical moral standing to the community?

I passionately urge you to deny this proposal for expansion of the current aquifer exemption designation. I'd also like to add, Mr. Hazard mentioned that if the mineral rights owners aren't allowed to extract the minerals that they own, they will have owned that property for nothing. Those

rights. Those rights would have been worthless for them.

Let me point out, if our water in our well is contaminated, our property is worthless. And that is where we live. 0083-2

That is all I have to say.

MR. BISHOP: I probably don't need the mike but I'll do it for you. I'm Jonathan Bishop, Chief Deputy Director.

And so one of the things that is important to me is that when I'm involved in making the presentations to the Board, which I have done all of my career, that I feel like the Board is actually listening to what people say. And so it is important to me to at least assure to you that I was listening to what you said. I took copious notes, and I will be reading all of the written comments associated with this project.

I'm going to ask Steve Bohlen, the Oil and Gas Supervisor, to provide an additional week for folks who wanted to provide written comments after the time of this hearing because they felt like they wanted to be able to see what was said here before they submitted their comments. I think that is a reasonable thing to request.

I'm going to be looking into the issues that were raised concerning past problems with pressure and oil in the area to understand that better. I want to say that if we move forward with this or any other aquifer exemption, and actually, as we move forward with any projects, even if there are no new aquifers, we will be requiring sentinel wells and information on assuring that the assumptions that go into aquifer exemptions are verified by monitoring and actual additional data.

I also understand that folks haven't had the -- the word is escaping me. I'm sorry, I will say it another way. The analysis that was done by our staff and DOGGR staff, hasn't been presented to you so I'm going to be urging our folks to put that information up on the web.

I want to say though one thing that I -- that is very important to me personally, because that -- I take my charge of that there are no existing uses -- and when I say "uses," I mean for drinking water or agriculture or any other use of water, that have been in the aquifer that we're talking about for exemption. And so we have looked very diligently at that issue, and we will continue to look diligently at those issues. And we will not be proposing any

aquifers where there is a beneficial use occurring.

I wanted to say that I listened to you, and I did, and I thank you all very much for being here.

MR. BOHLEN: Also, I'd like to echo Jonathan's comments. I heard some skepticism among some of the speakers that we wouldn't actually read your comments. We actually do read your comments. We make analysis of your comments, and we go back and look at the documentation. I also heard as Jonathan did that -- the rather robust analysis that our staff did on this. The company provides data. It's not an application. The company provides data. We ask for more data. Sometimes we ask for more and more data until we have the data that we think is necessary. But that analysis needs to be put up on the web so that you can assess the analysis for yourself.

But we do listen to your comments, and this actually afternoon and evening was precisely what we hoped to achieve, which was to obtain comments. I hope that some of you will submit written comments as well, if you didn't get sufficient time to tell us all the things that were a concern to you.

And I wanted to address some of the language that was equivocal. Remember this is part of

a process, and so for us to have already determined something without having come here and listen to you or gain other input, would not be honoring the process. So in fact, your comments, the written comments that will be submitted, in part inform the process. And so some of the language around there was equivocal because the process isn't finished. And the State, when it concludes its analysis, will have a basis, a summary of the basis of the decision which you will be able to see, and presumably we will have clearer language that is informed by all parties.

So in my view, this accomplished what we had hoped to accomplish. And I very, very much appreciate the time and energy that you have put into this. Your concerns and the palpable emotions with which you feel attached to the land, weren't missed. So thank you very much. I appreciate it.

Jonathan and I will be up front if you wish to speak with us for a few minutes. But thank you very much for coming, and thank you for your comments.

(Proceedings concluded at 6:35 p.m.)